

REMARKS

Applicants have carefully reviewed the non-final Office Action mailed October 6, 2009, and thank Examiner Fernandez for her review of the pending claims. In the Office Action, Claims 1-43 were rejected. In this response, Claims 1, 7, 10, 16, 38, and 42 are amended, and Claim 12 is canceled without prejudice and without waiver or disclaimer of subject matter. Support for the amendments is found in the application as filed. No new claims or new matter are added.

At least for the reasons set forth below, Applicants respectfully traverse the rejections. Further, Applicants believe that there are also reasons other than those set forth below why the pending claims are patentable, and reserves the right to set forth those reasons, and to argue for the patentability of claims not explicitly addressed herein, in future papers. Applicants respectfully request reconsideration of the present application in view of the above amendments and the following remarks.

In view of the following arguments, any pending claims are believed to be in condition for allowance. Therefore, this Response is believed to be a complete response to the Office Action. However, Applicants reserve the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of claims not explicitly addressed herein, in future papers.¹

Amendment of the claims as indicated is not an acknowledgement or admission that Applicants believe that they are somehow not entitled to broader protection and are made without prejudice or disclaimer. The amendment has been made solely to facilitate allowance of the present application. Applicants reserve the right to continue prosecution in one or more later filings.

¹ As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

REJECTION OF CLAIMS UNDER 35 USC § 102

The Examiner rejected claims 10-14, 16-18, and 20 under 35 U.S.C. §102(b) as being anticipated by Kindzelskii et al. (Biochimica et Biophysica Acta. 2000. 1495: 90-111)(“Kindzelskii”) in light of *Journal of Cell Science* (2001) 114: 1515-1520. The rejection is traversed.

To anticipate a claim, the reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)(emphasis added).

The cited reference, Kindzelskii, does not meet these requirements. Without prejudice and without waiver or disclaimer of subject matter, Applicants have amended independent Claims 10 and 16 to further distinguish the present claims under consideration. Thus, for example, independent Claim 1 as amended claims:

A method for converting the shape of polarized eukaryotic cells to spherical morphology, comprising the steps of:

determining a frequency of internal NAD(P)H oscillation within the polarized eukaryotic cells, and

applying a pulsed electric field to the cells,

wherein the field strength of said electric field is at least 10^{-5} volts/meter and application of said electric field causes at least one of the polarized eukaryotic cells to assume spherical morphology.

Independent Claim 16 has similar claim language. By comparison, the cited reference, Kindzelskii, is not addressed to any method to change the shape of polarized eukaryotic cells to spherical morphology, nor does it teach any such method in as complete a detail as contained in the present claims. The deficits of Kindzelskii are not addressed or cured by citation to the *Journal of Cell*

Science article. For at least these reasons, Applicants respectfully request that the rejection under Section 102 be withdrawn and that Claims 10 and 16, and their respective dependent Claims 13, 14, 17, 18, and 20, be allowed as written and amended.

REJECTION OF CLAIMS UNDER 35 USC § 103

Claims 1-20 and 38-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosenpire et al. (Biophysical Journal. 2000. 79(6): 3001-3008) (“Rosenspire”) in view of Kindzelskii, *supra*, and U.S. Patent No. 4,758,429 (“Gordon”). Claims 21, 22, 24-26, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon. Claims 21-37, 42, and 43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon in view of U.S. Patent No. 5,968,527 (“Litovitz”). The rejections are hereby traversed.

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580 (CCPA 1974). *See also Litton Systems, Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1569 (Fed. Cir. 1996) (rejecting defendants’ obviousness challenge on the grounds that “[t]he prior art simply does not contain many limitations contained in the claimed method”); Manual of Patent Examining Procedure (MPEP) at § 2143.03; *accord* M.P.E.P. § 706.02(j). . Moreover, the mere fact that references can be combined or modified does not render the resulting combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q. 2d 1430 (Fed. Cir. 1990).

The case law “makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for showing of the teaching or motivation to combine prior art references.” *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999); *see also Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 665 (Fed.Cir. 2000) This is because “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.” *Dembiczak*, 175 F.3d at 999. Thus, it is established law that one “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the

prior art to deprecate the claimed invention.” *Ecolchem, Inc. v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (citing *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988)).

Applicants respectfully assert that Rosenspire, Kindzelskii, Gordon, and/or Litovitz, by themselves or in any combination, do not meet the requirements of Section 103.

Without prejudice and without waiver or disclaimer of subject matter, Applicants have amended independent Claims 1, 7, 10, 16, 38, and 42 to further distinguish the present claims under consideration. Thus, for example, independent Claim 1 as amended claims:

A method of converting the shape of polarized eukaryotic cells to spherical morphology, comprising the steps of:

determining a frequency of internal NAD(P)H oscillation within the polarized eukaryotic cells, and

applying an electric field of sinusoidal frequency to the cells,

wherein application of said electric field cause at least one of the polarized eukaryotic cells to assume spherical morphology.

Independent Claims 7, 10, 16, 38, and 42 have similar language. By comparison, none of the cited references teach elements of the present claims directed specifically to converting the shape of polarized eukaryotic cells to spherical morphology by applying electric fields as presently claimed. Applicants’ reading of Rosenspire and Kindzelskii indicates no such disclosure.

The deficits of Rosenspire and Kindzelskii are not cured by combination with Gordon. Indeed, Gordon teaches away from the present invention and is nonanalogous art. Gordon teaches only with respect to introducing, into cells of joints under treatment, particles that are taken up by the cells, then applying energy to the cells in order to affect the behavior of the particles so that the particles cause accumulation of heat energy, effecting therapeutic changes in the cells and/or tissue under treatment. Unlike the present claims, the particles of Gordon are themselves invasive and reactive, causing changes, including potential immunogenic changes, to the targeted cells and tissues. In contrast to the present claims, Gordon contains no teaching of effecting a change in

targeted tissue without the use of energy-absorbing particles which induce changes in the affected target cells. Instead, embodiments of the present invention do not depend on the intracellular uptake of particles and induction of changes in the target cells by application of energy to the particles. In view of its subject matter and disclosure, Gordon is nonanalogous art that cannot be properly combined with any other cited reference to state a *prima facie* case of obviousness. See *Wang Laboratories, Inc. v. Toshiba Corp. et al.*, 993 F.2d 858, 865 (Fed. Cir. 1993); *In Re Hans Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992) (“The combination of elements from nonanalogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness”); see also MPEP §2141.01(a). Thus, Gordon does not cure the deficits of Rosenspire and Kindzelskii. *Wang Laboratories*, 993 F.2d at 864. For at least these reasons, the Section 103 rejection of Claims 1-20 and 38-41 should be withdrawn and the claims allowed as written and/or amended.

For similar reasons, Gordon cannot serve by itself as a basis for Section 103 rejection of Claims 21, 22, 24-26, and 31, or in combination with Litovitz, as a basis for Section 103 rejection of Claims 21-37, 42, and 43. For example, present Claim 21 claims:

A method of mitigating an inflammatory condition in a mammal, comprising the step of: applying an electric field of sinusoidal frequency to a tissue comprising an inflammatory condition of the mammal, wherein the field strength of the electric field within tissue comprises at least 10^{-2} volts/meter.

In contrast, for at least the reasons stated herein, Gordon contains no teaching which one of ordinary skill would consider instructive to the claims under consideration. The methods of Gordon depend exclusively on the use of magnetic or electric dipoles (particles) to absorb applied energy, destroy reactive cells, and induce therapeutic change. The teaching of Gordon have no relevance to the present claims, which effect therapeutic changes without the use of such particles, nor one of ordinary skill look to Gordon for any teaching of the elements of the present claims. Thus, Gordon does not support rejection of any claims under Section 103, either by itself or in combination with any other reference, including but not limited to, with Litovitz. For at least these reasons, the

Application No. 10/585,677
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Docket No.: 66174-0006

Section 103 rejection of Claims 21 – 37, and 42 should be withdrawn and the claims allowed as written and/or amended.

CONCLUSION

All rejections and objections have been addressed. In view of the above, the claims are believed to be in condition for allowance. Accordingly, reconsideration and allowance are respectfully requested and the Examiner is respectfully requested to pass this application to issue.

It is believed that any fees associated with the filing of this paper have already been identified in any transmittal accompanying this paper. However, if any additional fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge Deposit Account No. 18-0013 under Order No.66174-0006 in the name of Rader, Fishman and Grauer PLLC, from which the undersigned is authorized to draw.

If the Examiner has any comments or questions, she is kindly urged to call the undersigned to facilitate prosecution.

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Respectfully submitted,

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